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ABSTRACT

Literacy for participation in the economy has been promoted through legislation providing for adult education upgrading programs in the United States and Canada. More recently, publications and organizations have expressed concern for lack of participation in the economy by many adults who lack the necessary literacy skills. Although few doubt the relationship between literacy levels and ability to function in work-related literacy tasks, the level or degree of such literacy requirements is not known. Research has shown that the level of literacy in the workplace is not determined by a grade equivalent but by the literacy needs of the workplace. Furthermore, the nature of literacy in the workplace is different from school-based literacy. Researchers see little relationship between the manner in which literacy is presently developed and power or mobility. Admission to the workplace through testing may be in conflict with approaches to literacy development and with a person's legal rights. Successful literacy programs have tended to be those that have been developed in a particular domain or situation. Literacy programs integrated with job development have resulted in significant gains in job-related reading. Literacy for participation in the economy must also be seen in terms of producers (workers) and consumers. (19 references)

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Literacy for Participation in the Economy

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Literacy for Participation in the Economy

Literacy for participation in the economy is usually discussed in conjunction with advocating or establishing adult education upgrading programs. During the 1960's two Acts were passed, one in the United States and one in Canada, which made provision for such programs. The Economic Opportunity Act was passed in the United States in 1964 and grew out of the "war on poverty". Sticht (1988/89) suggests that this Act gave rise to the present formal adult literacy education system in the United States.

In 1960 Canada passed the Technical and Vocational Training and Occupation Act, the focus of which was employability. That is, individuals were expected to attain those skills/characteristics which would make them valuable to an employer. An arrangement between Ottawa and the provinces provided funding for a number of spaces in provincial training institutions. Initially many programs had a heavy academic upgrading component. However, in 1981 Ottawa withdrew funding for programs with an academic upgrading component below grade 8, which was believed to be a minimal entry level to a skills training program.

In more recent years publications and organizations have expressed concern for lack of participation in the economy by many adults who lack the necessary literacy

skills. Two publications in the United States (A Nation at Risk and Literacy Profile of America's Young Adults) suggest that due to low levels of literacy, the United States is losing its competitive edge in the marketplace (Sticht, 1988/89). The two organizations at the forefront of promoting literacy for the economy are associated with business - one in the United States and one in Canada. A brochure announcing the formation of the Business Council for Effective Literacy stated that:

> ... millions of adult nonliterates ... can't qualify for much of the work our technological economy demands .... An estimated three-fourths of the currently unemployed are functionally non-literate, seriously reducing the pool of competent persons for new hires. In addition, the promot-ability and mobility of many of the current employed are restricted for lack of the essential basic skills (cited in Sticht, 1986, p. 2).

The Canadian Business Task Force on Literacy was founded in 1985. A major aim of this organization is to promote an awareness of the impacts of low literacy levels on participation and functioning in the workplace (Ritts, 1986). According to the Task Force the direct cost of illiteracy to business amounts to $4.2 billion per year, while indirect costs to society reach $10.7 billion a year (Chang, 1990). "Business leaders are wondering if Canada can remain competitive in the international marketplace with

workers who are unable to keep pace with the growing demand for literacy of all types in the workplace" (Chang, 1990, p. 6). According to Norton (1990) "Global competition, loss of low-skilled jobs through relocation of industries, and the introduction of technology, are usual explanations for why higher levels of literacy are required" (p. 3). The impact on workers is phrased by Calamai (1988) as follows, "Two million workers across Canada are trapped in a tightening vice between their own illiteracy and a relentless rise in job demands for reading, writing and using numbers" (p. 37).

The Relationship Between Literacy and the Workplace

Sticht (1988/89) states that correlations between scores on standardized tests normed on school age children and job reading tasks range between .60 and .78, indicating a modest relationship. Few doubt that there is a relationship between literacy levels and ability to function in work type reading/writing tasks; however, what is not known is the level or degree of such literacy requirements. Pertinent data are just not available. For example, Ritts (1986) reports that a report to the provincial minister of labour by the Ontario Advisory Council on Occupational Health in January 1986, "indicated that workers' illiteracy is a major contributing factor to workplace accidents"; however, Ritts admits, "hard quantitative data is still unavailable" (p. 57).

Mikulecky and Diehl (1980) showed that blue collar and service workers performed about two grade levels higher on job reading materials than they did on materials of an academic nature. Clerical, sales, professional, and managerial personnel performed about 1.5 grades higher. Sticht et. al. (1986) emphasized the importance of job knowledge in examining literacy and job relationships. They showed that by taking job knowledge into account the estimate of general reading skills necessary for job literacy functioning could be reduced by as many as five grade levels - from grade 11 to grade 6.

Sticht (1988/89) also questioned the predictability of achievement test scores for rating job functioning. He traced the records of a number of functionally illiterate personnel who were accepted into the armed forces during the Second World War and the Vietnam War, and of 300,000 such individuals who were accepted between 1976-80, due to an error in calculating test scores. Sticht summarizes his findings on these functionally illiterates: "Data indicate that in terms of success in completing their military training and job technical training, and receiving satisfactory job ratings, some 80 percent of the low-aptitude, functionally illiterate personnel in all three time periods performed 80-95 percent as well as average aptitude personnel" (pp. 69-70).

The Nature of Work Literacy

Harste and Mikulecky (1984) state that, "Worker strategies for handling literacy on the job differ considerably from strategies employed during schooling." They explain:

> "In terms of raw reading time, high school juniors average 98 minutes of school-related reading daily (including homework). This figure is comparable to the amount of reading performed by blue-collar workers (97 minutes) but considerably lower than that of professionals (162 minutes) and mid-level clerical and retail workers (168 minutes). Student reading in high school appears to differ greatly from work reading. Work reading calls for reading to accomplish tasks, solve problems, and make evaluations about the usefulness of material. For the vast majority of high school students ... reading was for the purpose of finding facts to answer teachers' questions" (p. 66).

Harste and Mikulecky also pointed out that reading in the workplace does not take place in a sustained manner. Data on electronics workers and nurses showed that less than 2 percent of the reading in these occupations extended beyond an uninterrupted minute at a time. They describe reading in the workplace as "Workers read, look, do, and ask others" (p. 66). The importance of social interaction is also pointed out by Sticht (1975) and Mikulecky and Diehl (1980) who showed that workers can cope with job reading

material, 2 to 5 grade levels above their present reading levels through social interaction and collaboration. Thus appropriate oral language skills would appear to be key in a work situation.

Role of School/Literacy Programs

Scribner (1986) describes literacy in terms of three metaphors: adaptation, power, and state of grace. Adaptation basically means fitting into the existing social and economic structure; power refers to control over one's life, and state of grace, relates to the prestige which supposedly is accorded individuals who are highly literate. Fingeret (1990) expresses concern that the present relationship between school and literacy programs and the economy is adaptation and states that the present emphasis on literacy "is not about 'empowerment' of people who are poor and disenfranchised; it is about maintaining the present distribution of wealth and power, not only in America but across the planet. The purpose of literacy in this scenario is to enable adults to fit into the existing niches in the workplace" (p. 36). Kaestle (1990) and Venezky (1990) express similar concerns and see little relationship between the manner in which literacy is presently developed and power or mobility. Venezky emphasizes that literacy tasks such as "Training for punching the hamburger and french fry keys on the fast food register is inadequate for advancement to managerial positions in such enterprises" (p. 72).

Testing is a key element in the role of literacy programs (school or adult) and workplace relationships. In spite of hard predictability data between scores on standardized tests and success in the workplace, such tests are commonly used for purposes of inclusion and exclusion with regard to belonging to the "workplace club". These tests may be directly related in terms of deciding whether or not one receives a high school certificate (often viewed as a ticket for admission) or indirect, in terms of whether a child passes from one grade to the next, and eventually has a chance to "apply for this ticket". This manner of admission to the workplace may be in conflict with approaches to literacy development, such as whole language.

Such testing may also be in conflict with a person's legal rights. Mikulecky and Diehl (in Mikulecky, 1990) cite a legal case in the United States (Griggs versus Duke Power Company) in which the court ruled in favor of the job applicant, stating "that literacy can only be used as a screening mechanism for employment when a clear case can be made that literacy tests reflect actual job demands" (p. 30). While Mikulecky reports that there have been several subsequent similar court cases in the United States, no such cases seem to have been reported in Canada.

Integrating Literacy Development and Workplace Literacy Demands

Sticht (1986) states that crash literacy programs for adults have not worked. Literacy is not something which is first acquired and then applied. He further states that programs that tend to be successful are those that have been developed in a particular domain or situation. Sticht et. al. (1987) reported that literacy programs integrated with job development resulted in gains in job related reading, two to three times the gains made in general literacy programs. Furthermore, the gains made in general literacy were as great as, and sometimes greater than such gains made in the general literacy program. However, the opposite was not true; participation in general literacy programs resulted in almost no improvement in job related reading.

Examples of three successful programs are as follows:

A program sponsored by Travellers Insurance of Hartford, CT, for example, has been directed at welfare recipients. Applicants must demonstrate financial need, be highly motivated, and possess an aptitude for clerical work. Program content relates directly to the job for which the individual is preparing. In addition, counselling programs are available to help individuals with personal problems, including medical, housing and daycare. Trainees receive a minimum wage during an 18 week training period, after which they receive standardized wages. There has been a 98 percent completion rate (Ritts, 1986).

In Vancouver a manufacturer who noticed that some employees were reluctant to apply for promotions and that others had quit out of fear created by new technology, began a program of basic skills training, half on company time. Soon staff turnover decreased to manageable levels, productivity increased, and within six months the company turned around and became profitable (Gibb-Clark, 1990).

The Grande Cache School District in Alberta operates a program that is based on a major partnership between industry and the school district and makes it possible for high school students to receive generic instruction in theory and skill development in a practical experiential setting in eight related mechanical trades (automotives, heavy duty, autobody, sheet metal, machining/millwright, welding, piping, electricity). Completion of the 50 course credit enables students to challenge the first-year journeyman examination upon graduation from high school. This program is now being extended to related industries (Beggs, 1990).

Calamai (1988) points out that the success of such programs depend on a number of factors. He notes that the first national literacy workplace program in Canada sponsored by Laubach Literacy under a $1.2 million federal grant over three years is experiencing troubles. Calamai raises such issues as a backlash by management and workers to the word "literacy", and of union concerns that, once identified, illiterate workers may be let go.

Producers and Consumers

Finally, it must not be forgotten that the economy is not based solely on producers. The action of consumers control production and affect inflation. How literate are consumers, that is, consumer literate? How knowledgeable are they in terms of purchasing and purchasing power? Greber (1988) uses the term fiscal literacy which he maintains is "a basic life skill necessary to survival and prosperity" (p. 10). He believes that such literacy must be developed when a person is young and should be based on two concepts: a sense of value of what a product is worth to an individual rather than what it actually costs, and a concept of opportunity cost - that is, that for every decision made, there is an opportunity discarded or postponed. Literacy for producers cannot be focussed on to the exclusion of literacy for consumers.

Conclusion

Three conclusions can be drawn: (1) The level of literacy in the workplace is not determined by a grade equivalent but by the literacy needs of the workplace. (2) The nature of literacy in the workplace is different from how literacy is ordinarily operationalized in schools. (3) Literacy for participation in the economy must be seen in terms of producers (workers) and consumers.

Two questions need to be addressed: (1) Should preparation for participation in the economy by one of adaptation? (2) What is the role of literacy programs (adult

and school based) for the kind(s) of participation envisioned?

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